

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Tracey Harrach on 4/16/2008.

The application has been amended as follows:

- Cancel claims 7, 21-24, 26, and 27.
- In claim 14, line 2, delete "consisting of" and replace with --comprising--.
- In claim 14, lines 3-5, delete the phrase "an organic filler selected from the group consisting of polyvinyl chloride, melamine, and a homopolymer of vinylidene chloride" and replace with --polyvinylchloride fibers having a density of 1.38 g/cc--.

Statement of Reasons for Allowance

The present claims are allowable over the closest prior art Herring (US 4,878,431), Whelan (US 4,246,359), and Trask et al (US 4,726,987) for the following reasons:

The present claims are drawn to a rocket comprising an insulation material disposed between an inner surface of a case of a rocket motor and a propellant, the insulation material comprising a low-density ethylene propylene diene monomer polymer, at least one flame retardant, sulfur, polyvinyl chloride fibers having a density of 1.3 g/cc, and at least one additive

selected from antioxidant, cure accelerator, cure activator, tackifier, and plasticizer. A method of making said rocket motor is also claimed.

Herring discloses elastomeric insulating materials for rocket motors which are disposed between an inner surface of a rocket motor and the propellant comprising crosslinkable elastomeric polymers such as EPDM; polyaramide pulp; organic and inorganic flame retardants; and other additive such as plasticizers, tackifiers, and curatives such as accelerators and activators. Herring teaches the use of flame retardant additives such as chlorinated organic compounds with antimony oxide or hydrated alumina, however, it does not teach or suggest the use of a polymeric organic compound such as polyvinyl chloride or fibers other than polyaramide pulp.

Whelan discloses a flame retardant for hydrocarbon diene rubbers comprising a synergistic combination of a halogen containing organic compound such as polyvinyl chloride, alumina trihydrate, and an iron oxide. Whelan teaches that the halogen-containing organic compound may be non-polymeric or polymeric, including chlorine-containing polymers, e.g., polyvinyl chloride. Whelan fails to disclose or suggest the use of polyvinyl chloride fibers.

Trask et al teaches that polyvinylchloride is advantageous in fire-retardant applications due to its two-stage degradative process (col. 3, lines 18-28), however, it fails to disclose or suggest the use of polyvinyl chloride as a replacement for the char-forming polyaramide pulp like taught by Herring. Trask et al fails to even teach polyvinyl chloride fibers or a rocket motor insulation material.

Thus, it is clear that the references, taken individually or in combination, do not disclose or suggest the claimed invention.

In light of the above, it is clear that rejections of record are untenable and thus the present claims are passed to issue.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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